

DECORATIVELY FINISHED THERMOPLASTIC PRODUCT AND
METHOD FOR MANUFACTURING SAME

ABSTRACT OF THE DISCLOSURE

The invention relates to a decoratively finished product comprising a substrate made of polyphenylsulfone (PPSF), polycarbonate (PC), or ABS thermoplastic fabricated on a fused deposition modeling (FDM) machine or made of photo-curable resin or photo-curable resins blended with filling materials such as ceramic powder, nano-clay particles or nano-carbon tubes fabricated on a SterioLithography Apparatus (SLA) or made of powdered aluminum, glass-filled nylon or other powdered polymers fabricated on a Selective Laser Sintering (SLS) machine having a solid shape or hollow shape including internal cavities, channels or internal reinforcing structures to which either a metal surface is electroplated or applied by a plastic electroplating vapor deposition method or a finish simulating a range of natural and synthetic materials is applied using a water transfer printing method. The decoratively finished thermoplastic product includes various favorable characteristics, such as, being lightweight, exceptionally strong, scratch-resistant, and in the case of PPSF, flame retardant, resistance to many chemicals, capable of integrating imbedded components and possessing high thermal characteristics.